



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/266,680	03/11/1999	JEFF YOUNG	07844/292001	6131

21876 7590 02/13/2003

FISH & RICHARDSON P.C.  
500 ARGUELLO STREET  
SUITE 500  
REDWOOD CITY, CA 94063

EXAMINER

BASHORE, WILLIAM L

ART UNIT PAPER NUMBER

2176

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/266,680

Applicant(s)

YOUNG ET AL.

Examiner

William L. Bashore

Art Unit

2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This action is responsive to communication: amendment filed 11/25/2002, to the original application filed 3/11/1999. IDS filed 12/3/2001 (paper 2), and 4/11/2002 (paper 3).
2. The rejection of claims 1, 14, 22 under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, has been withdrawn as necessitated by amendment.
3. The rejection of claims 1-13 under 35 U.S.C. 103(a) as being unpatentable over Takasawa has been withdrawn as necessitated by amendment.
4. Claims 14-28 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama, and Takasawa.
5. Claims 14-36 are pending. Claims 1-13 have been canceled. Claims 29-36 have been added. Claims 14, 22, 25, 28, 34 are independent claims.

### *Claim Objections*

6. Amended claim 20 (dependent upon claim 19), and claim 32 (dependent upon claim 31) are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

In particular, claim 20 contains substantially similar subject matter as claimed in claim 19, and claim 32 contains substantially similar subject matter as claimed in claim 31.

***Claim Rejections - 35 USC § 103***

7. **The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 14-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Motoyama et al. (hereinafter Motoyama), U.S. Patent No. 6,009,436 issued December 28, 1999, in view of Takasawa et al. (hereinafter Takasawa), UK Patent Application, GB 2 307 571 A, publication date May 28, 1997.**

**In regard to independent claim 14, Motoyama teaches:**

- converting a format of a first source document (SGML) into a format of another similarly structured document (HTML) (Motoyama Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 14 "*A method of converting....the method comprising:*").

- Motoyama does not specifically teach identifying patterns common within documents.

However, Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 14 "*identifying patterns common to the first and second source documents;*", and "*using the identified common patterns*"). It would have been obvious to one of ordinary skill in the art at

Art Unit: 2176

the time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to produce documents accordingly (Motoyama column 6 lines 1-10, Appendix B, D, Figures 3A- 3B; compare with claim 14 "*map elements and sub-elements....in the second source document.*").

**In regard to dependent claim 15**, Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 15).

**In regard to dependent claim 16**, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 16).

**In regard to dependent claim 17**, Motoyama does not specifically teach creating a DTD if one does not exist in the first document. However, Takasawa teaches a DTD created from analyzation of structured information from a sample document (Takasawa page 4 at middle; compare with claim 17). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's DTD creation to Motoyama, providing Motoyama the flexibility of creating an initial DTD if needed.

Art Unit: 2176

**In regard to dependent claim 18**, claim 18 is rejected using the same rejection and rationale as set forth by the Examiner in the current rejection of claim 14.

**In regard to dependent claim 19**, Motoyama teaches mapping from SGML to HTML utilizing mapping tables of Appendices A-D, said mapping utilizing various heuristics in order to perform said mapping (Motoyama Appendix A-D; compare with claim 19).

**In regard to dependent claim 20**, claim 20 is rejected using the same rejection and rationale as set forth by the Examiner in the current rejection of claims 19.

**In regard to dependent claim 21**, claim 21 incorporates substantially similar subject matter as claimed in claim 14, and in further view of the following, is rejected along the same rationale.

Motoyama teaches that processing systems are known in which a processor converts a markup language document automatically into another format (Motoyama column 2 lines 42-45; compare with claim 21).

**In regard to independent claim 22**, Motoyama teaches:

- converting a format of a first source document (SGML) into a format of another similarly structured document (HTML) (Motoyama Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 22 "*A method of converting...the method comprising:*").

- Motoyama does not specifically teach identifying patterns common within documents.

However, Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed

Art Unit: 2176

pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 22 “*identifying patterns common to the source document and the set of source documents;*”, and “*the common pattern*”). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa’s pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to produce documents accordingly (Motoyama column 6 lines 1-10, Appendix B, D, Figures 3A- 3B; compare with claim 22 “*mapping elements and sub-elements... in the set of source documents.*”, and “*in common pattern of the source document*”, and “*in common pattern of the set of source documents*”).

- Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 22 “*replacing tag names*”).

**In regard to dependent claim 23**, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 23).

**In regard to dependent claim 24**, Motoyama does not specifically teach creating a DTD if one does not exist in the first document. However, Takasawa teaches a DTD created from analyzation of

Art Unit: 2176

structured information from a sample document (Takasawa page 4 at middle; compare with claim 24). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's DTD creation to Motoyama, providing Motoyama the flexibility of creating an initial DTD if needed.

**In regard to independent claim 25, Motoyama teaches:**

- converting a format of a first source document (SGML) into a format of another similarly structured document (HTML) (Motoyama Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 25 "*A computer program....causing a computer system to:*").

- Motoyama does not specifically teach identifying patterns common within documents.

However, Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 25 "*identify patterns common to the first and second source documents;*", and "*using the identified common patterns*"). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa's pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1 at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to produce documents accordingly (Motoyama column 6 lines 1-10, Appendix B, D, Figures 3A- 3B; compare with claim 25 "*map elements and sub-elements ... of the second source document.*").



**In regard to dependent claim 26**, Motoyama teaches mappings within Appendices A-D, said appendices comprising various tag replacement (Motoyama column 29 line 45, to column 31 line 48; compare with claim 26).

**In regard to dependent claim 27**, Motoyama teaches transformation of an SGML document into an HTML document, said transformation incorporating analyzation of their respective DTDs, and utilizing the mappings of Appendices A-D (Motoyama Abstract, column 6 lines 1-4, 30-32, Appendices A-D, Figures 3A-3B; compare with claim 27).

**In regard to independent claim 28**, Motoyama teaches:

- a storage device (Motoyama Figure 19 item 1236; compare with claim 28 “*a storage device*”).
- converting a format of a first source document (SGML) into a format of another similarly structured document (HTML) (Motoyama Abstract, column 3 lines 27-29, column 6 lines 30-32; compare with claim 28 “*A computer system comprising*”, and “*for storing a source document...the set of source documents;*”).

- Motoyama does not specifically teach identifying patterns common within documents.

However, Takasawa teaches a structure list for “totalizing” extracted logical structure information from sample documents (Takasawa page 9, near bottom). Takasawa parses documents, and compares various elements to elements and attributes in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents, precipitating generation of a DTD based upon said list (Takasawa page 9 near bottom, to page 10 at top, also pages 11-12, and page 16 at bottom, Figures 8-11; compare with claim 28 “*identify patterns common to the first and second source documents;*”). It would have been obvious to one of ordinary skill in the art at the time of the invention to apply Takasawa’s

Art Unit: 2176

pattern identification to Motoyama, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process (Takasawa page 1, at middle).

- mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document, the mapping of SGML elements to HTML elements are used by Motoyama to produce documents accordingly (Motoyama column 6 lines 1-10, Appendix B, D, Figures 3A- 3B; compare with claim 28 “*map elements and sub-elements....of the set of source documents.*”).

**In regard to dependent claims 29-33**, claims 29-33 reflect the computer program product comprising computer readable instructions used for performing the methods as claimed in claims 17-21, respectively, and are rejected along the same rationale.

**In regard to claims 34-36**, claims 34-36 reflect the computer program product comprising computer readable instructions used for performing the methods as claimed in claims 22-24, respectively, and are rejected along the same rationale.

**9. Prior art made of record and not relied upon is considered pertinent to disclosure.**

Cohen, William W., Learning Rules that Classify E-Mail, AAAI Spring Symposium on Machine Learning in Information Access, 1996.

*Response to Arguments*

10. Applicant's arguments filed 11/25/2002 have been fully and carefully considered but they are not persuasive.

Applicant argues on page 8 of the amendment that Motoyama does not teach defining a mapping based on identified patterns common to two documents. The examiner respectively notes that Motoyama teaches mapping elements and sub-elements from one source document to equivalent elements and sub-elements in the second document (i.e. mapping of SGML elements to HTML elements). Takasawa teaches a structure list for "totalizing" extracted logical structure information from sample documents. Takasawa parses sample documents, and compares various elements to elements in said structure list (i.e. appearance frequency), resulting in a listed pattern of structured elements in the documents. Takasawa's pattern identification is applied to Motoyama's mapping, providing Motoyama the benefit of simplifying the exchange of similar documents for reuse, by taking into account common patterns in the mapping process. The claimed limitations do not specifically preclude the use of direct human intervention regarding the mapping process.

Applicant argues on page 8 (near bottom) of the amendment that Takasawa does not teach using identified common patterns to map elements and sub-elements. The examiner respectively notes that Takasawa teaches a structure list for "totalizing" information based on comparisons of sample document structure data. Takasawa's list utilizes an appearance frequency, which denotes the number of times an element appears in a plurality of input sample documents. Accordingly, said appearance frequency, as disclosed by Takasawa, can be interpreted as reflective of a common pattern of appearance in a plurality of documents (Takasawa page 11, near bottom). The examiner applies this pattern analysis to Motoyama's mapping.

Applicant argues on page 9 (near top) of the amendment that the cited art of record does not teach identifying common patterns in differently formatted documents. The examiner respectively notes that the

Art Unit: 2176

independent claimed limitations of representative claim 14 recites in pertinent part, “*identifying patterns common to the first and second source documents*”. This limitation is based on conversion between a source document and a similarly structured second source document, as presently claimed.

Applicants arguments on page 9-10 of the amendment are substantially similar to those already presented, and have been previously addressed above.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Bashore whose telephone number is (703) 308-5807. The examiner can normally be reached on Monday through Friday from 11:30 AM to 8:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Heather Herndon, can be reached on (703) 308-5186.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Art Unit: 2176

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 746-7239 (for formal communications intended for entry)

or:

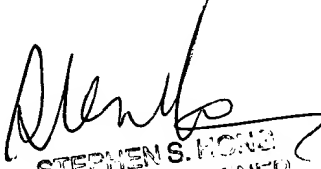
(703) 746-7240 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

or:

(703) 746-7238 (for after-final communications)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Fourth Floor (Receptionist).

William L. Bashore  
02/06/2003

  
STEPHEN S. HONG  
PRIMARY EXAMINER